

09753266-122900

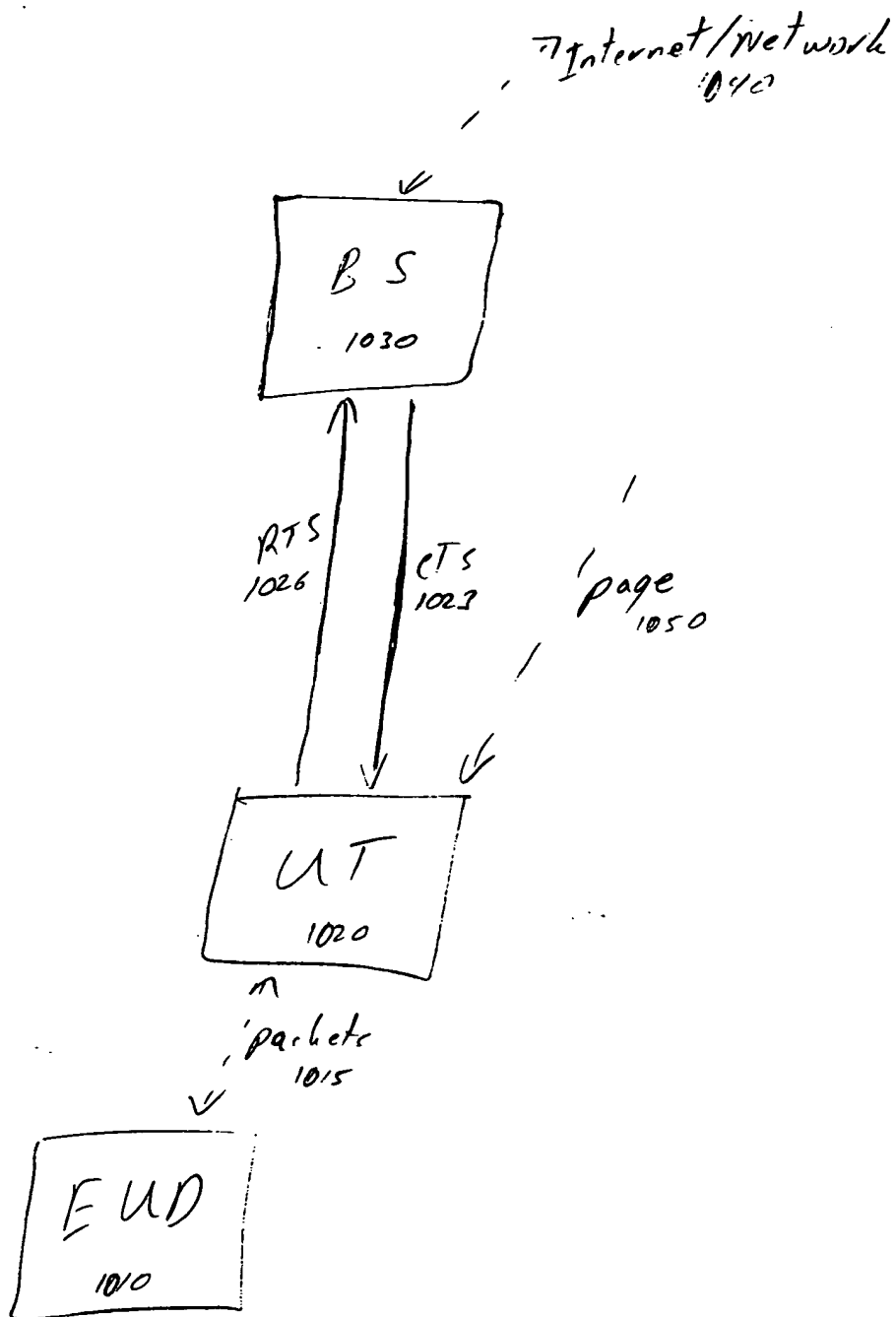


Fig. 1A

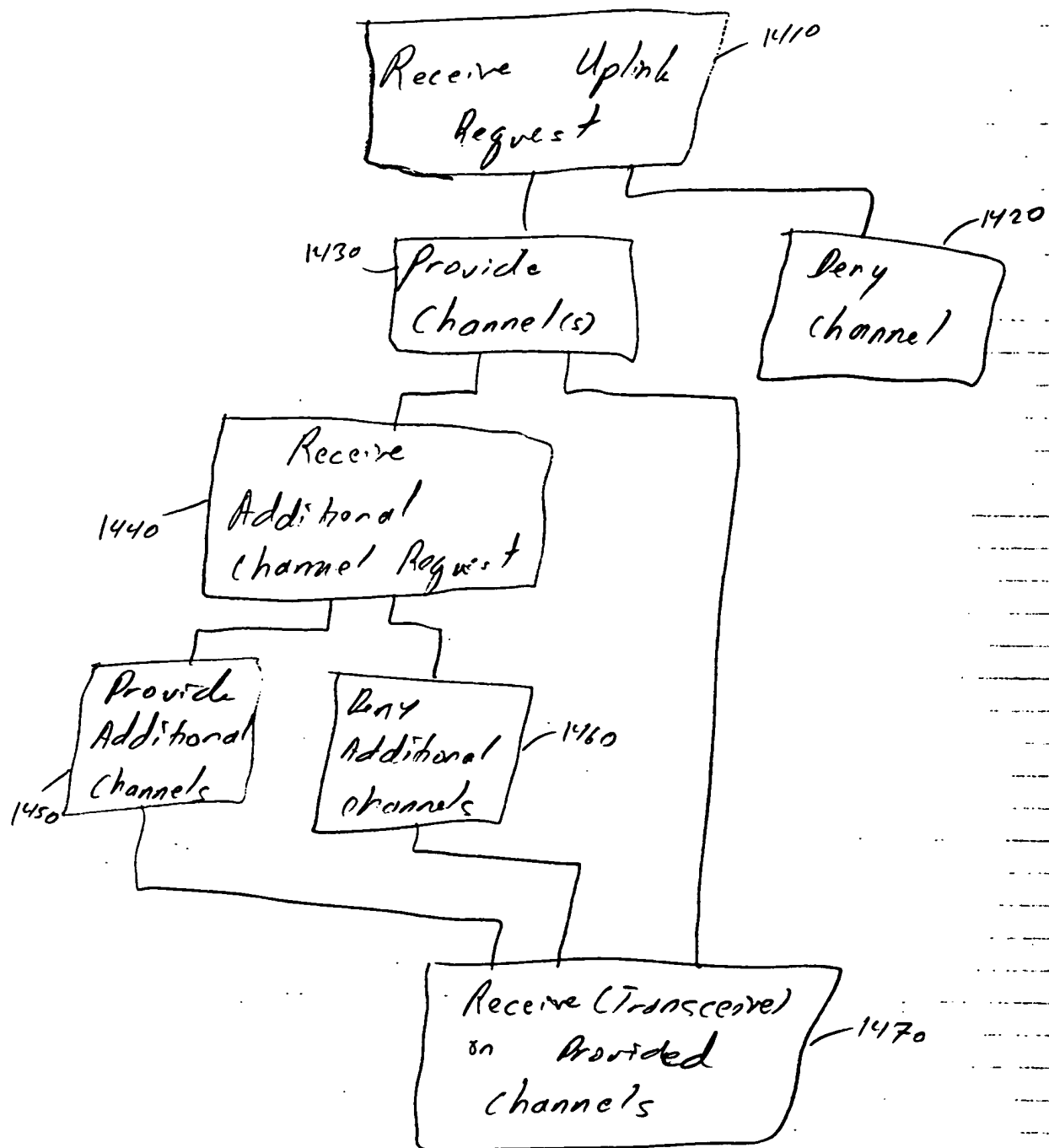
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	A	B	C
1			
3			
5			
7			
9			
11			
13			
15			

Fig. 1B



**TOPS**  
5500



00622T-9925260

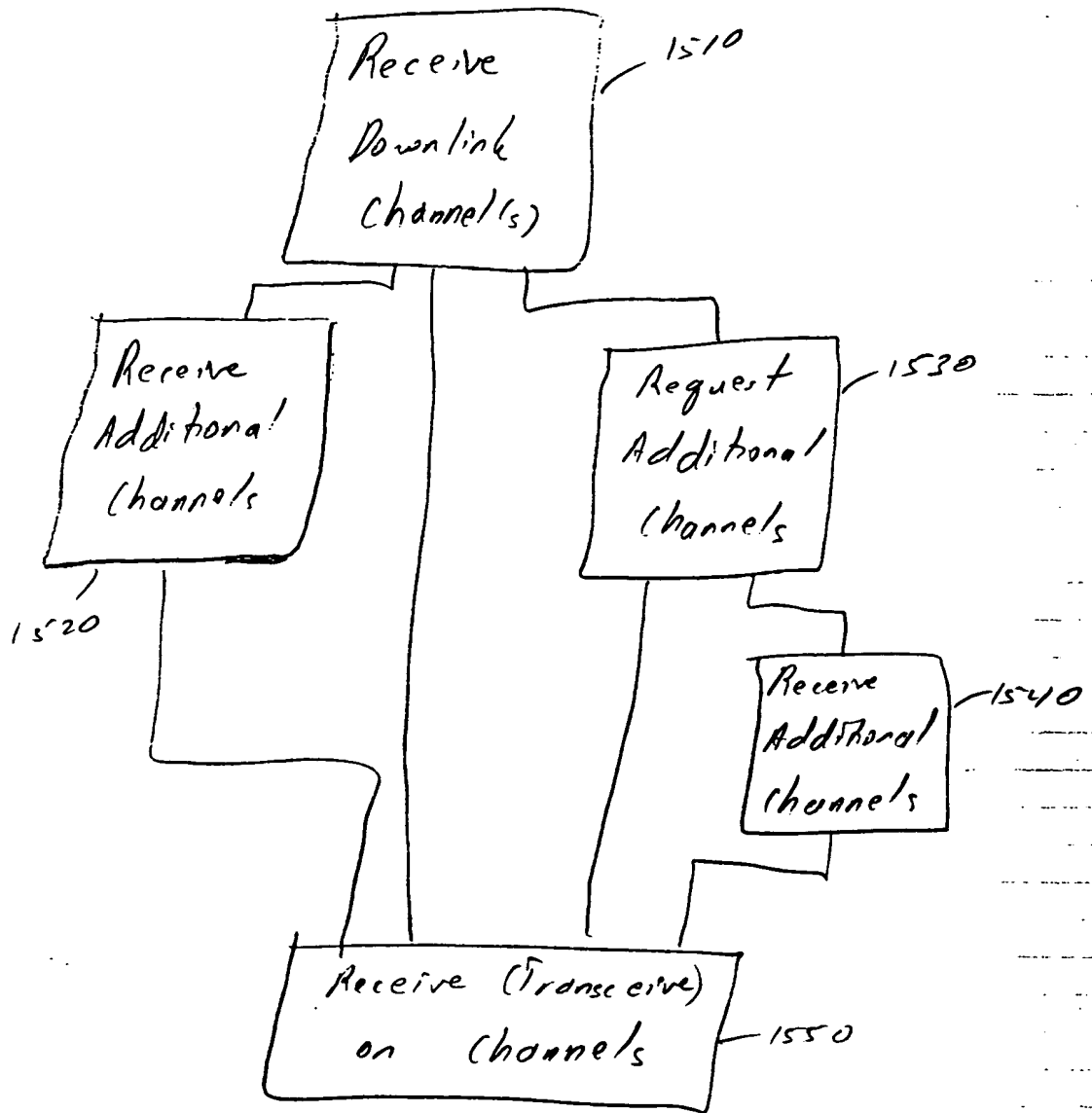
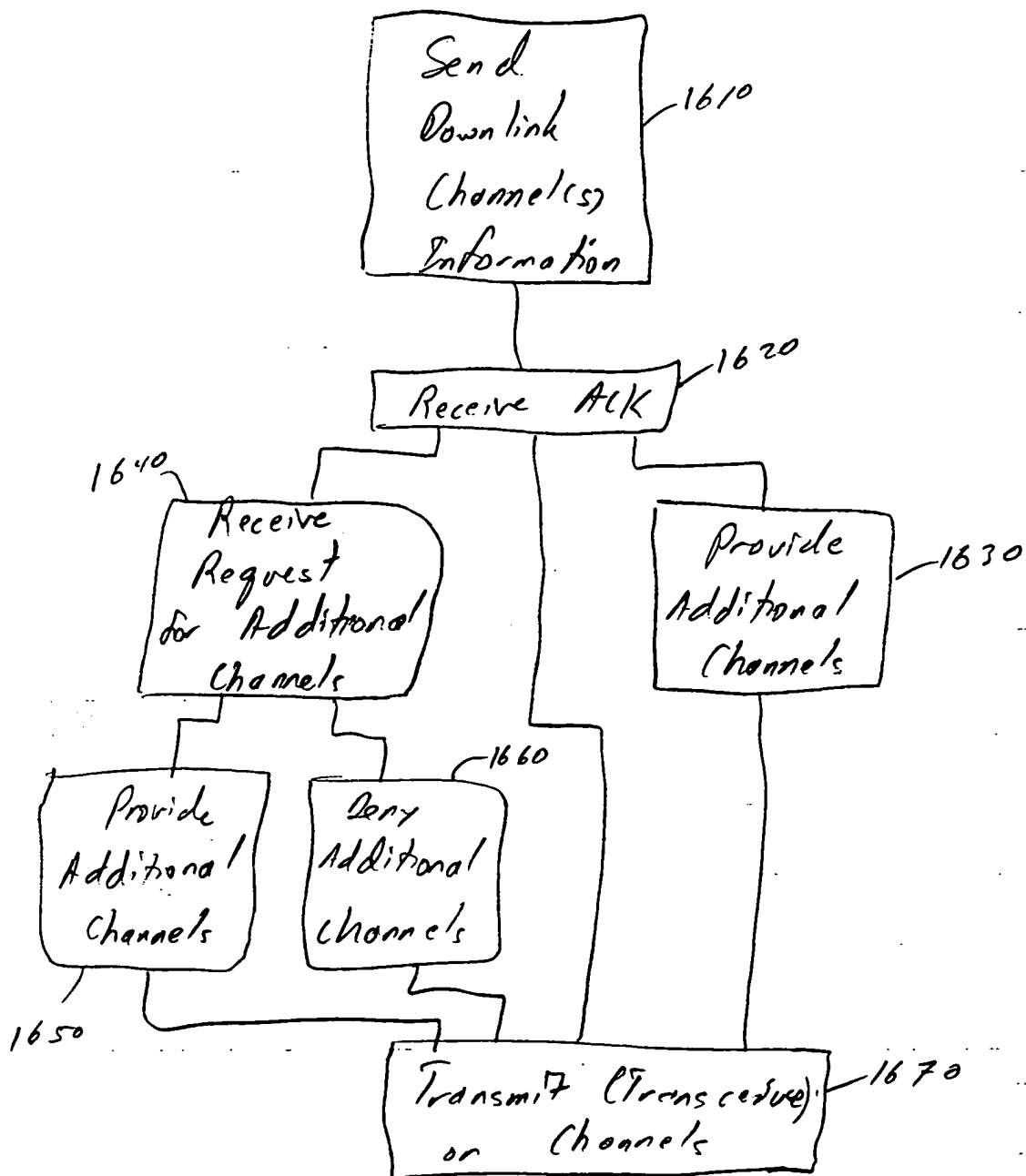


Fig. 4

7423  
5522



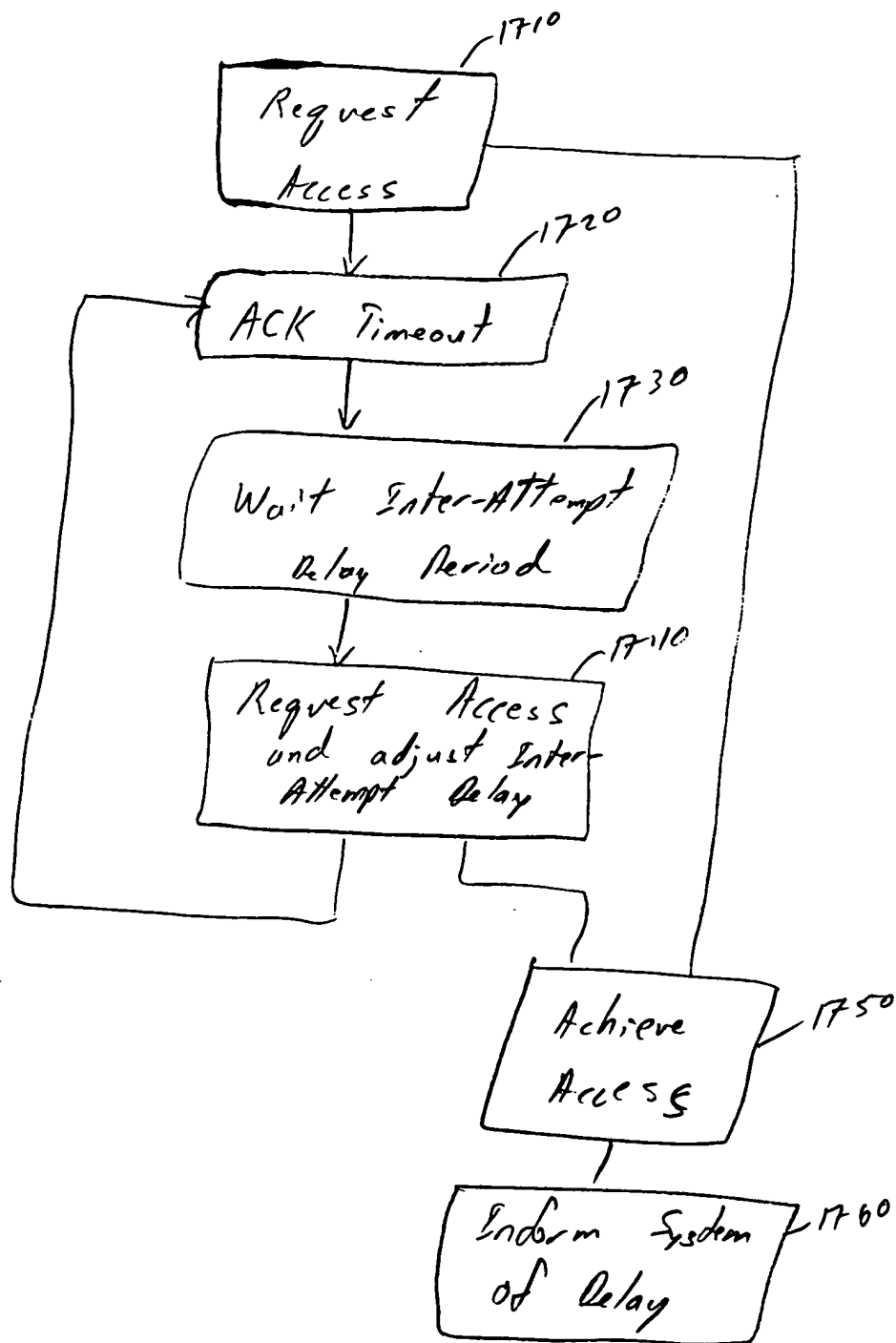


Fig. 6

09753266-120900

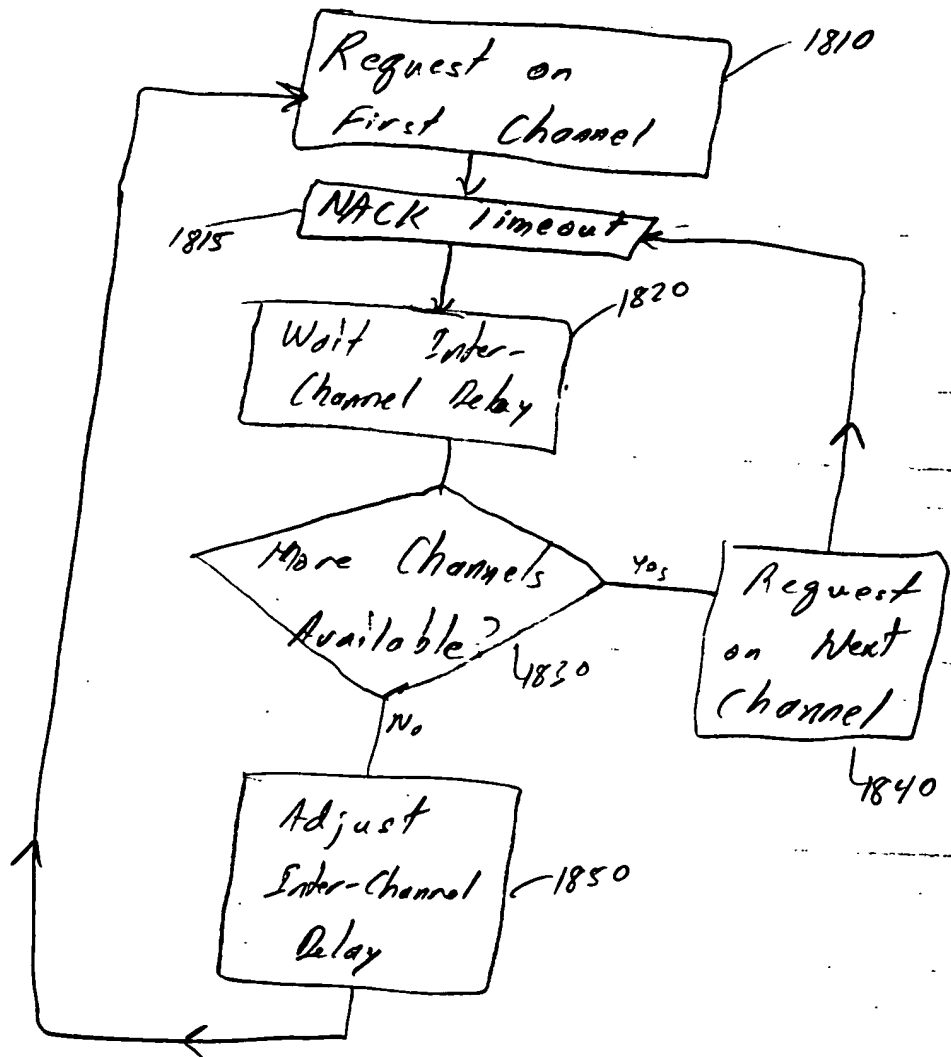


Fig. 7



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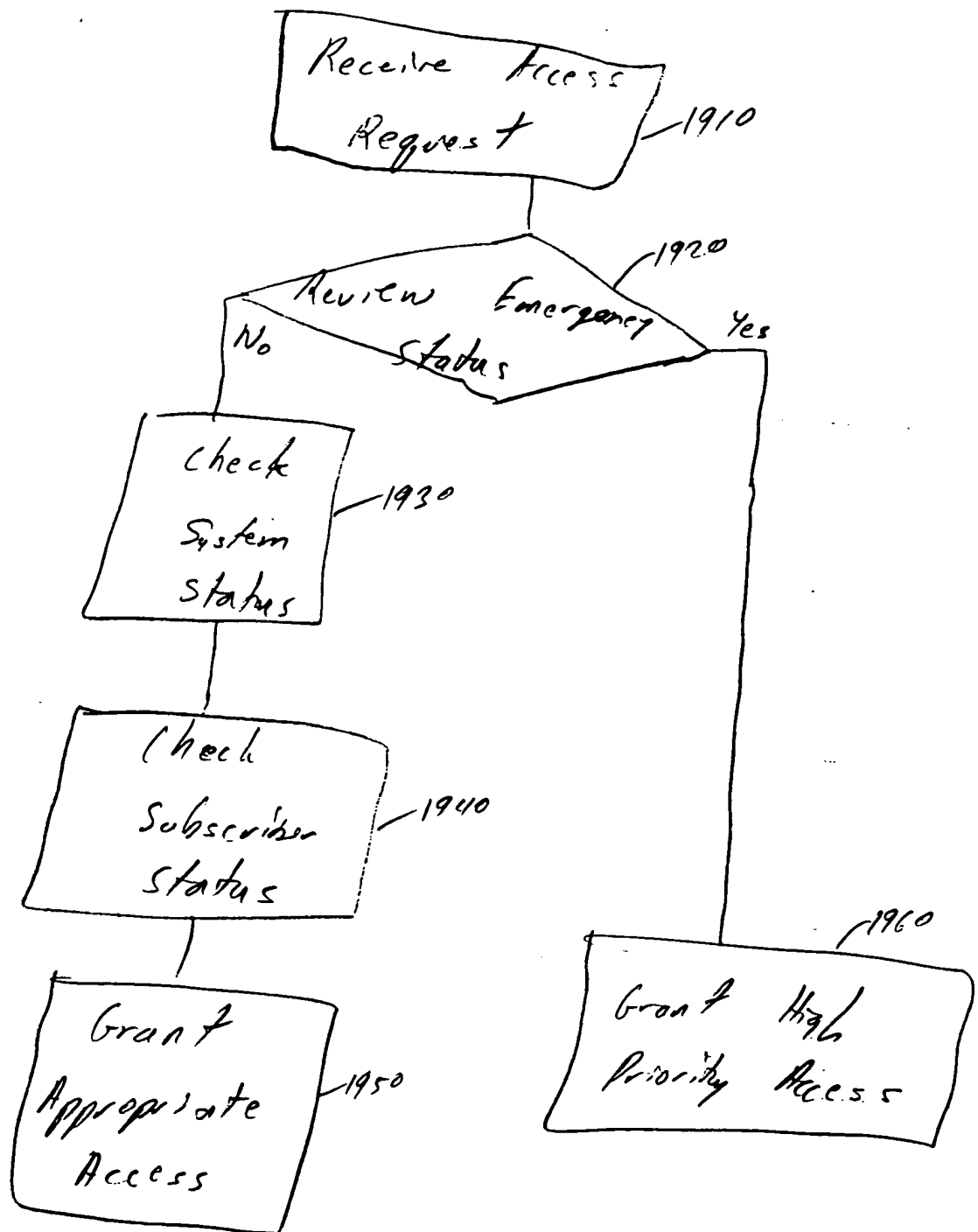


Fig. 8

0053266-12500

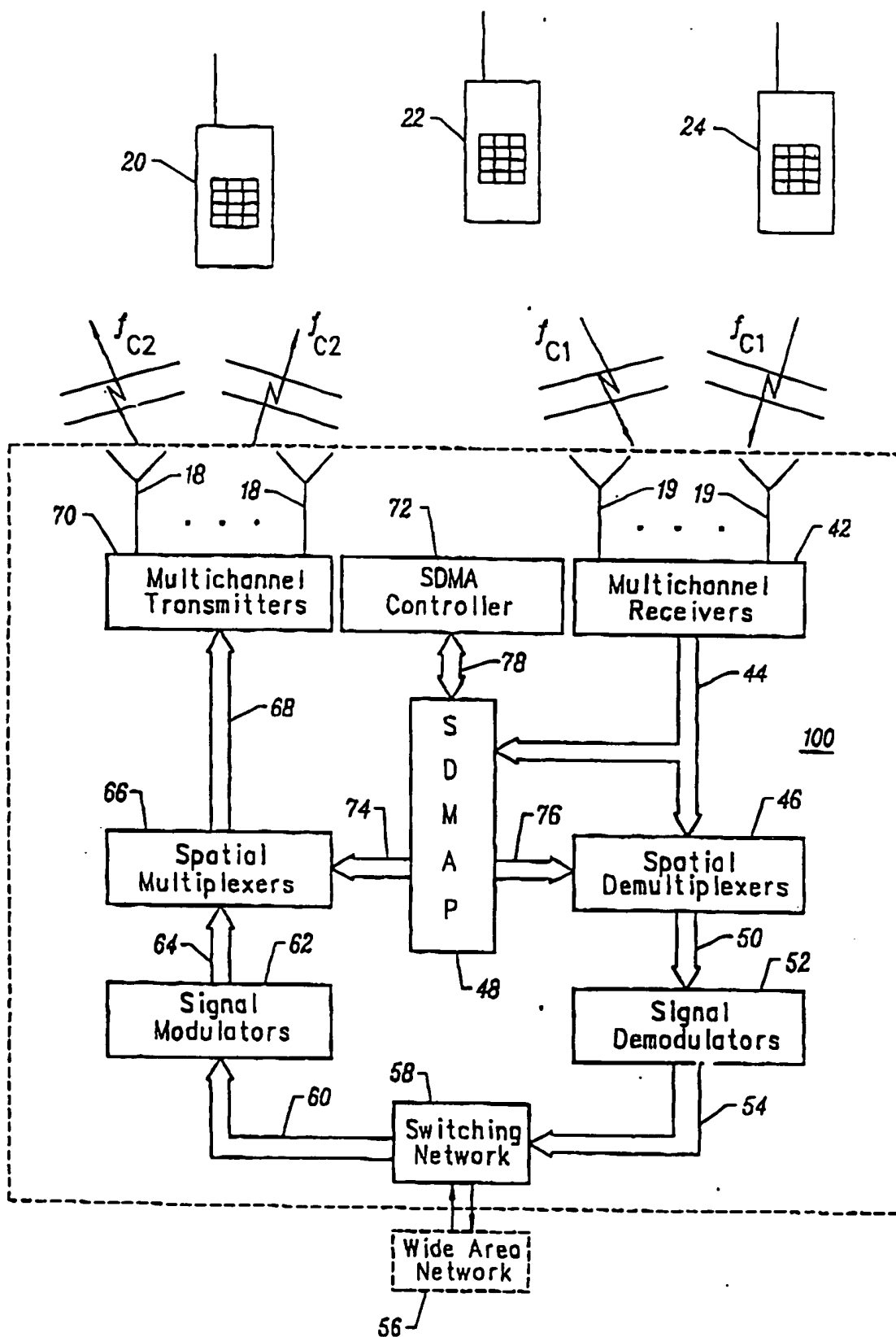


FIG. 9

The diagram illustrates a system architecture for a mobile communication system. At the top, three mobile stations are shown, labeled 20, 22, and 24. Each station consists of a rectangular body with a grid of small squares representing an antenna array and a vertical line representing an antenna. They are connected via lightning bolt symbols to a central base station. The base station is composed of several interconnected blocks. At the bottom, a block labeled 'From Signal Modulators' (64) has an upward arrow (66) pointing to a 'Spatial Multiplexers' block (68). To the right of the 'Spatial Multiplexers' block is a tall vertical block labeled 'SDMA P' (48). A horizontal arrow (74) points from the 'SDMA P' block to the 'Spatial Multiplexers' block. An upward arrow (70) points from the 'Spatial Multiplexers' block to a 'Multichannel Transmitters' block. Above the 'Multichannel Transmitters' block is a diagram of a parabolic antenna (70) with multiple beams radiating upwards towards the mobile stations. The entire system is enclosed in a dashed-line boundary.

006522 9925450

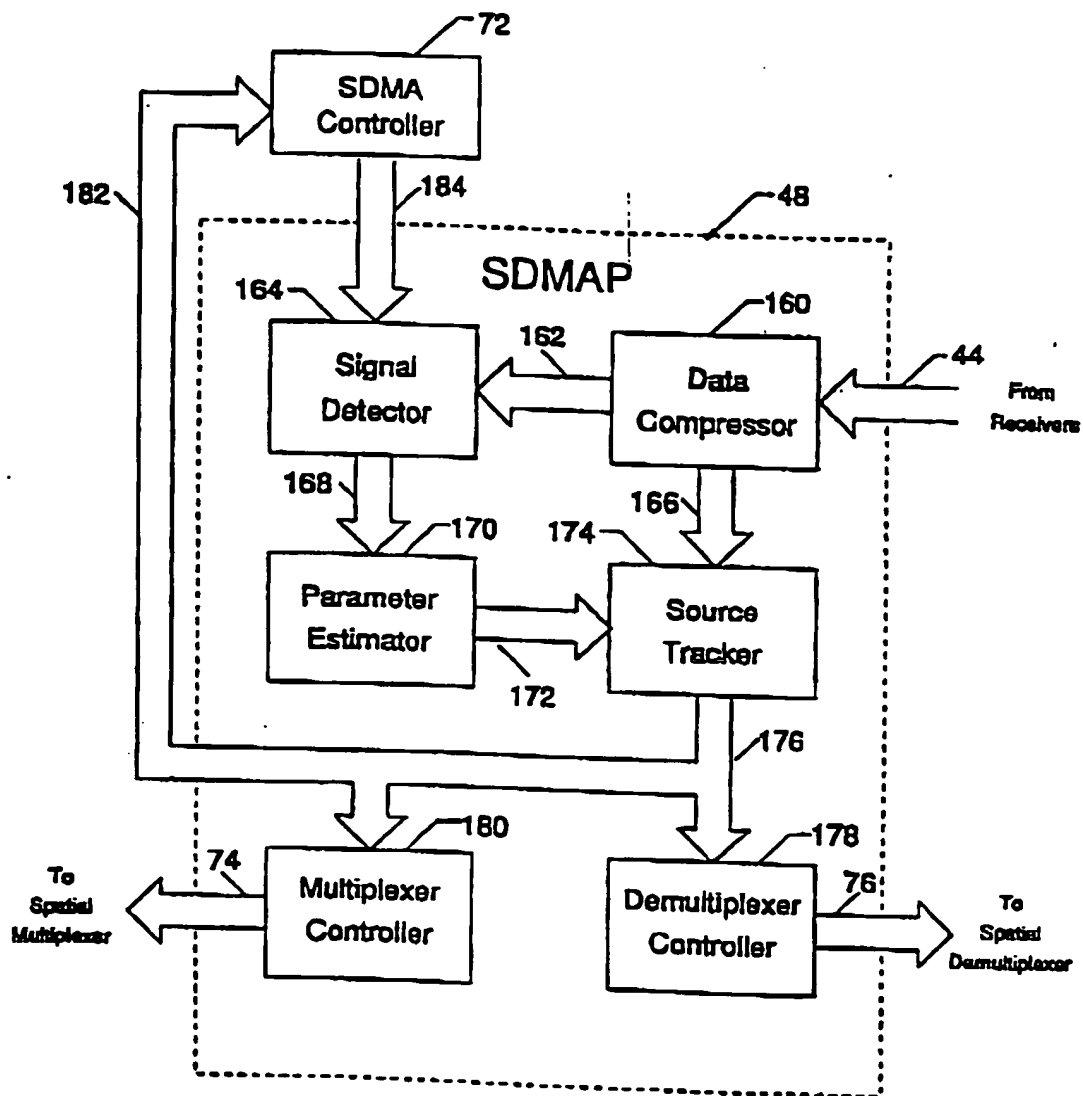


FIG. 1

The diagram illustrates a multi-channel receiver and transmitter system. At the top, four antenna elements are shown within a dashed box labeled 103. These antennas are connected to a central DUPLEXER block (107) which has RX and TX ports. The RX port of the duplexer is connected to a 4x RF RECEIVER MODULES block (205) via a line labeled 4. The TX port is connected to an RF TRANSMIT MODULES block (245) via a line labeled 4. The 4x RF RECEIVER MODULES block (205) is connected to an ADC block (209) via a line labeled 4. The ADC block (209) is connected to a DOWN CONVERTER block (213) via a line labeled 4. The DOWN CONVERTER block (213) is connected to a TIMESLOT PROCESSORS block (217) via a line labeled 4x4. The TIMESLOT PROCESSORS block (217) is connected to a HOST DSP block (231) via a line labeled 4. The RF TRANSMIT MODULES block (245) is connected to a TRANSMIT CONTROLLER/MODULATOR block (237) via a line labeled 4. The TRANSMIT CONTROLLER/MODULATOR block (237) is connected to the HOST DSP block (231) via a line labeled 4. A central RF/TIMING CONTROLLER block (233) is connected to the DUPLEXER (107), the ADC (209), the RF TRANSMIT MODULES (245), and the HOST DSP (231). The HOST DSP block (231) is also connected to a HIGHER LEVEL PROCESSING block at the bottom.

**Figure 12**

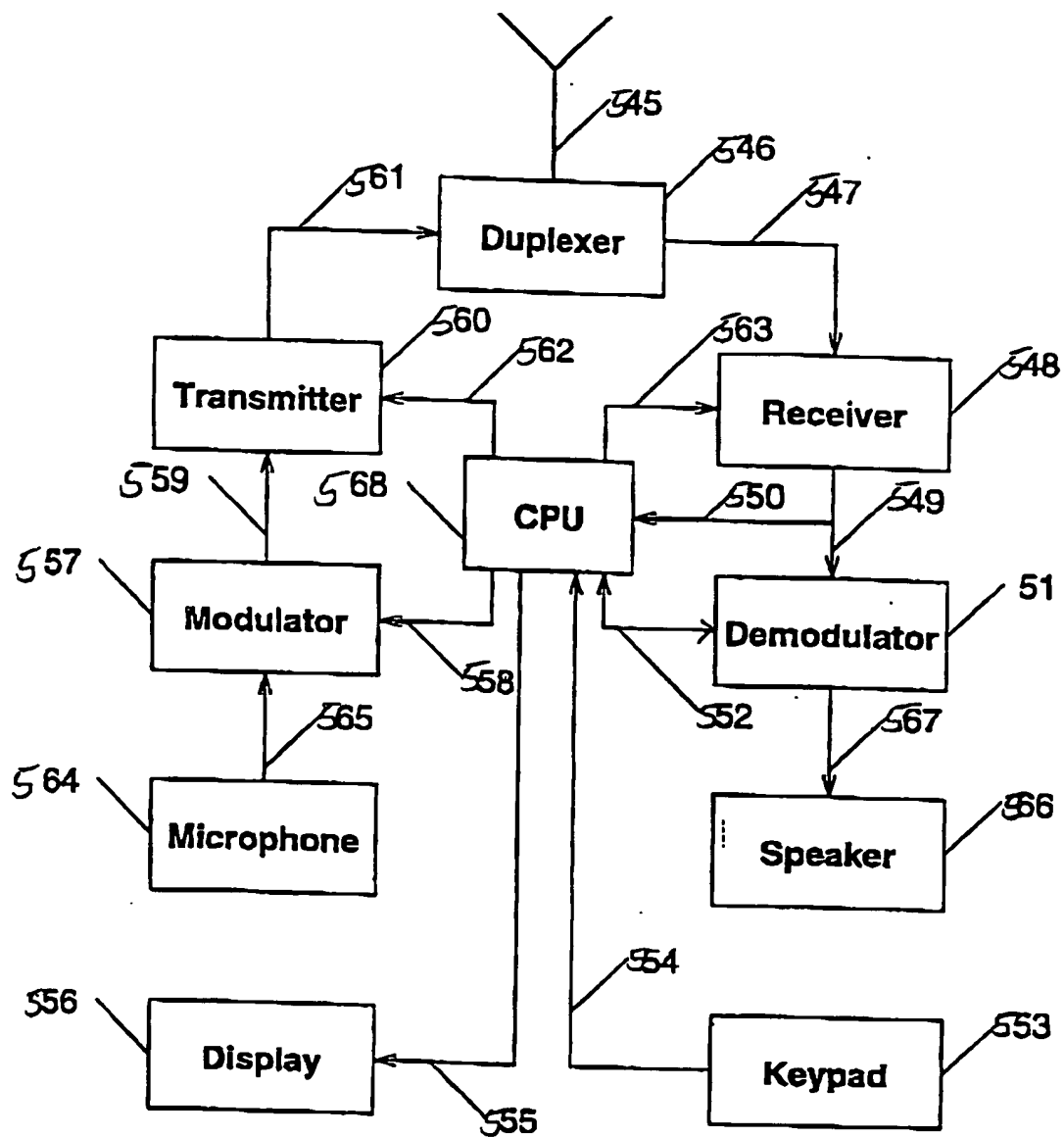


FIG. 13

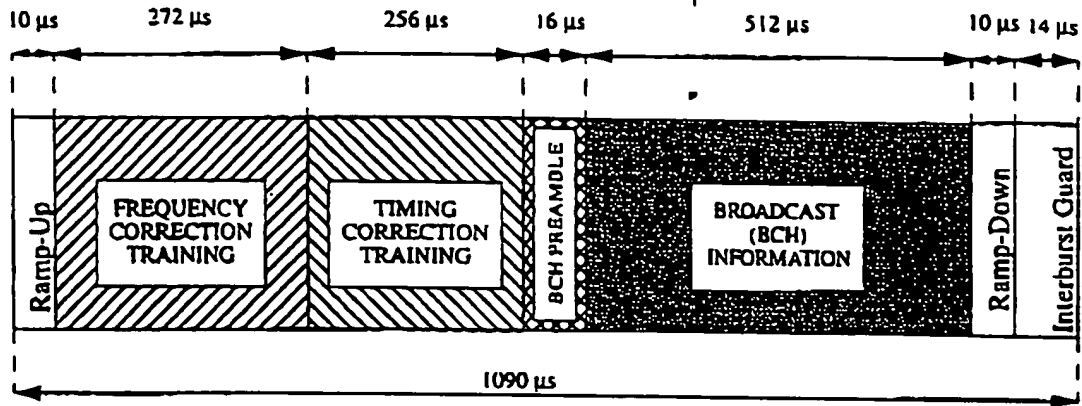


Fig. 14

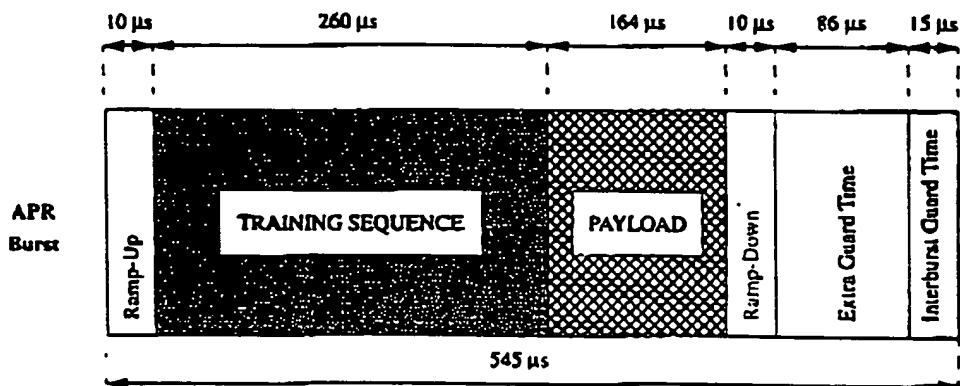


Fig. 15

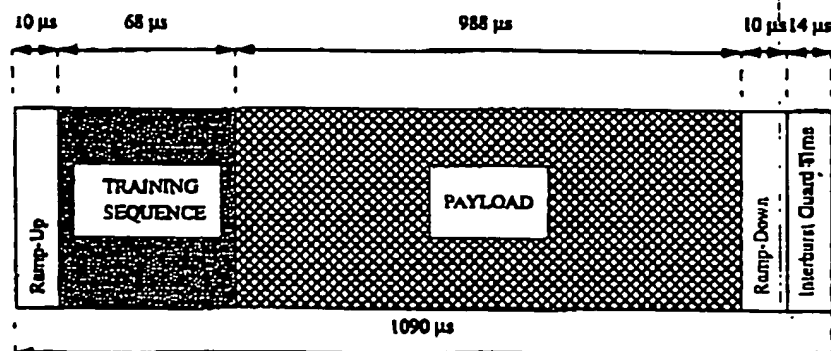


Fig. 16

	Base Station		Remote Terminal
300	Acquire GPS Timing		
302	Determine BCH slot time		
304		BCH $\Rightarrow$	
306			Scan BCH channels
308			Acquire Frame Timing
310			Acquire Synchronization
312			Build Map of Base Stations BCHs and BSCCs
314			Select Base Station
316			Build CR using UTID and transmit power
318			Scramble CR using BSCC
320		$\Leftarrow$ Configuration Request	
322	Unscramble CR using BSCC		
324	Determine Spatial Signature of Remote CR		
326		Configuration Message $\Rightarrow$	
328			Adjust timing and power
330		$\Leftarrow$ Traffic Request	
332		Traffic Assignment $\Rightarrow$	
334		$\Leftarrow$ Traffic $\Rightarrow$	
336		Send packet $\Rightarrow$	
338		$\Leftarrow$ Send DA and packet	
340		Send DA and packet $\Rightarrow$	
342		$\Leftarrow$ Send DA and packet	

**Figure 17**